



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>7</sup> :</b> <b>C07K 14/81, C07H 21/04, C12N 15/66,</b> <b>15/70, 15/74, 15/79, 15/81, 1/21, 1/19,</b> <b>A61K 38/55, 38/57, A61P 7/02, A23J</b> <b>1/04</b>	<b>A1</b> -	<b>(11) International Publication Number:</b> <b>WO 00/39165</b>  <b>(43) International Publication Date:</b> 6 July 2000 (06.07.00)
<b>(21) International Application Number:</b> PCT/NZ99/00227  <b>(22) International Filing Date:</b> 23 December 1999 (23.12.99)  <b>(30) Priority Data:</b> 333568                      23 December 1998 (23.12.98)      NZ 336906                      23 July 1999 (23.07.99)      NZ  <b>(71) Applicant (for all designated States except US):</b> THE HOR- TICULTURE AND FOOD RESEARCH INSTITUTE OF NEW ZEALAND LIMITED [NZ/NZ]; Batchelar Research Centre, Highway 57, Palmerston North (NZ).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> SCOTTI, Paul, Douglas [NZ/NZ]; 872 West Coast Road, Waiatarua, Auckland (NZ). DEARING, Sally, Caroline [NZ/NZ]; 927A Aririmu Road, Aririmu, Auckland (NZ). GREENWOOD, David, Roger [NZ/NZ]; 22 Panapa Drive, St. John's Park, Auckland (NZ). NEWCOMB, Richard, David [NZ/NZ]; 46 Minnehaha Avenue, Titirangi, Auckland (NZ).		<b>(74) Agents:</b> BENNETT, Michael, Roy et al.; West-Walker Ben- nett, Mobil on the Park, 157 Lambton Quay, Wellington (NZ).  <b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>
<b>(54) Title:</b> SERINE PROTEASE INHIBITOR  <b>(57) Abstract</b>  The invention provides a protein which exhibits, <i>inter alia</i> , anti-thrombin activity and divalent metal cation binding activity. The protein can be readily extracted from the green-lipped mussel, <i>Perna canaliculus</i> , and formulated into foodstuffs, nutraceuticals and the like, and has a molecular weight of about 55 kDa and an amino acid sequence which includes one or more of the following: (a) DGEQCNDGQN (SEQ ID NO.1), (b) QGGHEVESERVACCVIGRA (SEQ ID NO. 2), (c) GQSHPEIVH (SEQ ID NO. 3), (d) YHGHDDA (SEQ ID NO. 4), (e) VVNEVVH (SEQ ID NO. 5)		